

PATENT COOPERATION TREATY

PCT

INTERNATIONAL SEARCH REPORT

(PCT Article 18 and Rules 43 and 44)

Applicant's or agent's file reference H0002285	FOR FURTHER ACTION see Notification of Transmittal of International Search Report (Form PCT/ISA/220) as well as, where applicable, item 5 below.	
International application No. PCT/US 02/ 28266	International filing date (day/month/year) 29/08/2002	(Earliest) Priority Date (day/month/year) 30/08/2001
Applicant HONEYWELL INTERNATIONAL INC.		

This International Search Report has been prepared by this International Searching Authority and is transmitted to the applicant according to Article 18. A copy is being transmitted to the International Bureau.

This International Search Report consists of a total of 6 sheets.



It is also accompanied by a copy of each prior art document cited in this report.

1. Basis of the report

- a. With regard to the **language**, the international search was carried out on the basis of the international application in the language in which it was filed, unless otherwise indicated under this item.



the international search was carried out on the basis of a translation of the international application furnished to this Authority (Rule 23.1(b)).

- b. With regard to any **nucleotide and/or amino acid sequence** disclosed in the international application, the international search was carried out on the basis of the sequence listing :



contained in the international application in written form.



filed together with the international application in computer readable form.



furnished subsequently to this Authority in written form.



furnished subsequently to this Authority in computer readable form.



the statement that the subsequently furnished written sequence listing does not go beyond the disclosure in the international application as filed has been furnished.



the statement that the information recorded in computer readable form is identical to the written sequence listing has been furnished

2. ☒ **Certain claims were found unsearchable** (See Box I).

3. ☐ **Unity of invention is lacking** (see Box II).

4. With regard to the title,

the text is approved as submitted by the applicant.



the text has been established by this Authority to read as follows:

5. With regard to the abstract,

the text is approved as submitted by the applicant.



the text has been established, according to Rule 38.2(b), by this Authority as it appears in Box III. The applicant may, within one month from the date of mailing of this international search report, submit comments to this Authority.

6. The figure of the drawings to be published with the abstract is Figure No.

as suggested by the applicant.



because the applicant failed to suggest a figure.



because this figure better characterizes the invention.

1

None of the figures.

INTERNATIONAL SEARCH REPORT

International Application No

PCT/US 02/28266

A. CLASSIFICATION OF SUBJECT MATTER
IPC 7 H02K1/24

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

IPC 7 H02K H01J

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)

WPI Data, PAJ, EPO-Internal

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category °	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	PATENT ABSTRACTS OF JAPAN vol. 009, no. 159 (E-326), 4 July 1985 (1985-07-04) & JP 60 035931 A (HITACHI SEISAKUSHO KK), 23 February 1985 (1985-02-23) abstract	1-10
A	PATENT ABSTRACTS OF JAPAN vol. 009, no. 173 (E-329), 18 July 1985 (1985-07-18) & JP 60 046746 A (TOSHIBA KK), 13 March 1985 (1985-03-13) abstract	1-10
A	DE 44 36 257 A (SIEMENS AG) 4 April 1996 (1996-04-04) abstract; figure 3	1-10

☒ Further documents are listed in the continuation of box C.

☒ Patent family members are listed in annex.

° Special categories of cited documents :

- *A* document defining the general state of the art which is not considered to be of particular relevance
- *E* earlier document but published on or after the international filing date
- *L* document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)
- *O* document referring to an oral disclosure, use, exhibition or other means
- *P* document published prior to the international filing date but later than the priority date claimed

- *T* later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention
- *X* document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone
- *Y* document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art.
- *Z* document member of the same patent family

Date of the actual completion of the international search

6 December 2002

Date of mailing of the international search report

16/12/2002

Name and mailing address of the ISA

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INTERNATIONAL SEARCH REPORT

International Application No

PCT/US 02/28266

C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT		
Category °	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	US 5 298 823 A (JOHNSEN TYRONE A) 29 March 1994 (1994-03-29) abstract; figures 1-4 ----	1-10
A	PATENT ABSTRACTS OF JAPAN vol. 007, no. 292 (E-219), 27 December 1983 (1983-12-27) & JP 58 165638 A (TOKYO SHIBAURA DENKI KK), 30 September 1983 (1983-09-30) abstract ----	1-10
A	US 5 325 009 A (CAPION ROBERT L ET AL) 28 June 1994 (1994-06-28) column 4, line 52 -column 5, line 50; figure 2 ----	1-10
A	PATENT ABSTRACTS OF JAPAN vol. 2000, no. 01, 31 January 2000 (2000-01-31) & JP 11 299142 A (SHINKO ELECTRIC CO LTD), 29 October 1999 (1999-10-29) abstract ----	1-10
A	PATENT ABSTRACTS OF JAPAN vol. 005, no. 055 (E-052), 16 April 1981 (1981-04-16) & JP 56 006636 A (MATSUSHITA ELECTRIC WORKS LTD), 23 January 1981 (1981-01-23) abstract ----	1-10
A	PATENT ABSTRACTS OF JAPAN vol. 009, no. 185 (E-332), 31 July 1985 (1985-07-31) & JP 60 055846 A (TOYO DENKI SEIZO KK), 1 April 1985 (1985-04-01) abstract ----	1-10
A	PATENT ABSTRACTS OF JAPAN vol. 004, no. 141 (E-028), 4 October 1980 (1980-10-04) & JP 55 094549 A (TOSHIBA CORP), 18 July 1980 (1980-07-18) abstract -----	1-10

FURTHER INFORMATION CONTINUED FROM PCT/ISA/ 210

Continuation of Box I.2

The subject-matter of claim 1 is not entirely supported in the description in the sense of Article 6 PCT: in the description, middle of page 7, it is said that the supports (170a-d) are meant to provide proper support, alignment and retention of the end turns (160a-d) as they curve around the spokes (130a-d). It is further said that said supports surround the corresponding spokes on three of their sides. In other words, from the description and the figures it is clear that said supports are positioned at the AXIAL ENDS of the spokes and provide support for the END TURNS of the coil windings, whilst in claim 1 it is merely said that said plurality of supports are positioned proximate respective spokes, and that coils of wire windings are wrapped around said supports. Nowhere in the claims are the end turns mentioned. Therefore claim 1 is not fully supported by the description.

Moreover, another contradiction between the claims and the description concerns the reference number (190a-d) which has been attributed to CAP HATS in the description, bottom of page 7 to bottom of page 8, whilst in claim 1 the reference number (190a-d) has been given to CAP DEVICES, which are said to include CAP HATS in claim 5. This is not clear in the sense of Article 6 PCT, because cap devices are not mentioned in the description, and the cap hats (190a-d) are first mentioned in claim 5. Moreover, from the wording of claim 1 it is not entirely clear what is meant by "ends of the spokes (130a-d)", middle of claim 1: said ends could be radial ends or axial ends. Article 6 PCT.

INTERNATIONAL SEARCH REPORT

International application No.
PCT/US 02/28266

Box I Observations where certain claims were found unsearchable (Continuation of item 1 of first sheet)

This International Search Report has not been established in respect of certain claims under Article 17(2)(a) for the following reasons:

1. ☐ Claims Nos.:
because they relate to subject matter not required to be searched by this Authority, namely:
2. ☒ Claims Nos.:
because they relate to parts of the International Application that do not comply with the prescribed requirements to such an extent that no meaningful International Search can be carried out, specifically:
see FURTHER INFORMATION sheet PCT/ISA/210
3. ☐ Claims Nos.:
because they are dependent claims and are not drafted in accordance with the second and third sentences of Rule 6.4(a).

Box II Observations where unity of invention is lacking (Continuation of item 2 of first sheet)

This International Searching Authority found multiple inventions in this international application, as follows:

1. ☐ As all required additional search fees were timely paid by the applicant, this International Search Report covers all searchable claims.
2. ☐ As all searchable claims could be searched without effort justifying an additional fee, this Authority did not invite payment of any additional fee.
3. ☐ As only some of the required additional search fees were timely paid by the applicant, this International Search Report covers only those claims for which fees were paid, specifically claims Nos.:
4. ☐ No required additional search fees were timely paid by the applicant. Consequently, this International Search Report is restricted to the invention first mentioned in the claims; it is covered by claims Nos.:

Remark on Protest

- ☐ The additional search fees were accompanied by the applicant's protest.
- ☐ No protest accompanied the payment of additional search fees.

INTERNATIONAL SEARCH REPORT

Information on patent family members

International Application No

PCT/US 02/28266

Patent document cited in search report		Publication date	Patent family member(s)	Publication date
JP 60035931	A	23-02-1985	NONE	
JP 60046746	A	13-03-1985	NONE	
DE 4436257	A	04-04-1996	DE 4436257 A1	04-04-1996
US 5298823	A	29-03-1994	NONE	
JP 58165638	A	30-09-1983	JP 1621650 C JP 2047193 B	09-10-1991 18-10-1990
US 5325009	A	28-06-1994	NONE	
JP 11299142	A	29-10-1999	NONE	
JP 56006636	A	23-01-1981	NONE	
JP 60055846	A	01-04-1985	NONE	
JP 55094549	A	18-07-1980	NONE	